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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,773	01/26/2004	Loellyn J. Cassell	112056-0132	9734
24267 7590 03/02/2007 CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			EXAMINER ASSESSOR, BRIAN J	
			ART UNIT 2114	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/764,773

Applicant(s)

CASSELL ET AL.

Examiner

Brian J. Assessor

Art Unit

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1229/2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-13, 18-20, 24-26 and 30-41 is/are allowed.
- 6) ☒ Claim(s) 14-17, 21-23 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

New claims 30-41 have been added and are addressed below.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 21-23 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 21-23 contain computer readable media which is defined in the specification to include electro-optic and magnetic forms of media. These are forms of energy and are non-statutory under 35 USC 101, proper correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by Elko (5,664,155).

As per claim 29:

Art Unit: 2114

A utility for retrieving coredump data a coredump disk, selected from a set of disks owned by a failed filer into which memory data ("coredump") of the failed filer is stored, comprising:

a reader that scans disk labels of the set of disks to locate a label indicating the coredump disk with coredump being present in a file system region thereof; (Elko column 30, lines 26-36)

a writer that writes the coredump in file system region of the coredump disk to a root file system of one of either the failed filer or another filer taking-over ownership of the set of disks. (Elko column 22, line 65 – column 23, line 2).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 14 is rejected under 35 U.S.C. 102(e) as being anticipated by Hetrick (6,751,136).

Art Unit: 2114

As per claim 14:

A method returning a coredump disk, selected from a set of disks owned by a failed filer into which memory data ("coredump") of the failed filer is stored, back to a "hot" spare status comprising the steps of:

recognizing an event that requires a spare disk to be made available; (Hetrick column 4, lines 56-59; when the failed drive is replaced the hot spare detects and returns to spare status)

writing a "kill" signature to a core region header of the coredump disk in order to return the coredump disk as soon as practicable to the "hot" spare status, wherein the "kill" signature terminates coredump operation to the coredump disk. (Hetrick column 4, lines 56-59; when the failed drive is replaced the hot spare detects and returns to spare status)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hetrick (6,751,136) in view of Elko (5,664,155).

As per claim 15:

Art Unit: 2114

Hetrick fails to explicitly disclose a method wherein the step of writing includes updating a coredump status attribute in the core region header to indicate a "no coredump" status from one of at least of "coredump in-progress" status or a "coredump complete" status and writing the updated core region header to the coredump disk.

In column 25, lines 59-63, Elko clearly teaches a method where a header keeps track of the current status of the coredump on the disk. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the system as taught by Hetrick to include the status information in the header in order to keep track of when the coredump is in progress or completed. This would have been obvious because Elko teaches that the above method is better suited for improved core dumping and fault information capturing. (Elko column 3, lines 1-13)

Claims 16, 17, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elko (5,664,155) in view of Reeves (7,028,154).

As per claim 16:

A disk mapping layout for a spare disk that is one of a set of disks owned by a failed file server into which memory data ("coredump") of the failed file server is stored comprising:

a disk table of contents (TOC) region including a disk TOC that maps a plurality of regions on the disk; (Elko column 22, line 65 – column 23, line 2)

Art Unit: 2114

a core region that stores an identifier indicating a status of the disk including at least one of a no-coredump status, a coredump in-progress status, a coredump complete status and a coredump aborted status; (Elko column 25, lines 59-63)

Elko fails to explicitly disclose a method wherein a file system region including storage space for the pointed-to by the core region that is adapted to store a complete coredump data therein so as to define the disk as a dedicated coredump disk.

In column 1, lines 52-55 and in figure 5, elements 535 and 540, Reeves clearly discloses a method wherein a system contains designated core dump disks. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the method of using designated core disks as taught by Reeves in order to create a more efficient and reduce the time required to transfer data from short term to long term memory. (Reeves column 2, lines 51-57)

As per claim 17:

The disk mapping layout as set forth in claim 16 further comprising a pair of disk labels regions located at a fixed offset and remote from each other so as to minimize risk of loss of labels data. (Elko column 8, lines 30-37)

As per claim 27:

A method releasing a coredump disk, selected from a set of disks owned by a failed filer into which memory data ("coredump") of the failed filer is stored, back to a status as a spare disk comprising the steps of:

Art Unit: 2114

releasing the coredump disk from being the dedicated disk in response to at least one of either (a) completion of the receipt of the coredump and transfer of the coredump data to a predetermined data structure for subsequent access or (b) abort of the coredump before the completion and transfer. (Elko column 24, lines 10-18)

Elko fails to explicitly disclose a method wherein a file system region including storage space for the pointed-to by the core region that is adapted to store a complete coredump data therein so as to define the disk as a dedicated coredump disk.

In column 1, lines 52-55 and in figure 5, elements 535 and 540, Reeves clearly discloses a method wherein a system contains designated core dump disks. It would have been obvious to a person of ordinary skill in the art at the time of invention to include the method of using designated core disks as taught by Reeves in order to create a more efficient and reduce the time required to transfer data from short term to long term memory. (Reeves column 2, lines 51-57)

As per claim 28:

The method as set forth in claim 27 wherein the step of releasing includes writing an attribute to a header of the coredump disk that is identified by either of the failed filer or another filer taking-over ownership of the set of disks as no longer indicating a coredump status. (Elko column 8, lines 30-37)

Allowable Subject Matter

Claims 1-13, 18-20, 24-26, and 30-41 allowed.

Art Unit: 2114

The following is an examiner's statement of reasons for allowance:

As per claim 1:

Claim 1 includes multiple limitations that in combination are allowable over the prior art. More specifically the limitations of ordering the disks so as to prefer disks that require a least amount of preparation to receive a coredump and prefer disks that are least likely to be needed for normal service by the server. The combination of these limitations with the other steps listed in the limitations of claim 1, make it novel.

As per claims 2-7:

Claims 2-7 are allowable through dependency on claim 1.

As per claim 8:

The limitations of claim 8 in combination with one another make it allowable over the prior art. Specifically locating a coredump disk in a group of disks in a fail filer by reading labels on the disks to locate any of the disks that are non-formatted spare disks, and reading the core header region of the cached labels to locate a coredump status attribute. The prior art does contain coredump status information, however it does not include a method for searching multiple disk labels and caching disk labels for coredump disks. The combination of these limitations with the other steps listed in the limitations of claim 8, make it novel.

As per claims 9-13:

Art Unit: 2114

Claims 9-13 are allowable through dependency on claim 8.

As per claim 18:

The limitations of claim 18 in combination with one another make it allowable over the prior art. Specifically the limitation of selecting the best candidate data storage device based upon a predetermined combination criteria. The best candidate limitation with the limitations that determine that criteria are novel.

As per claims 19 and 20:

Claims 19 and 20 are allowable through dependency on claim 18.

As per claim 24:

Claim 24 is a system claim corresponding to the method claim 18. Therefore, claim 24 is rejected for the same rationale set forth in claim 18.

As per claims 25 and 26:

Claims 25 and 26 are allowable through dependency on claim 24.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

As per claims 30-35:

Claims 30-35 are allowable for the same rationale set forth in claims 1-6.

As per claims 36-41:

Claims 36-41 are allowable for the same rationale set forth in claims 1-6.

Response to Arguments

Applicant's arguments filed 12/29/2006 have been fully considered but they are not persuasive. Applicant's arguments are addressed below.

Applicant Argues:

Applicant argues that Elko does not disclose "a reader that scans disk labels of the set of disks to locate a label indicating the core dump disk with core dump being present in a file system region thereof." More specifically that Elko doesn't disclose a reader for reading disk labels to determine core dump disks and that there is no disclosure determining which disks from a group of disks is a core dump disk.

Examiner's Response:

In column 30, lines 21-25 Elko clearly discloses use of a program that makes use of a "read-SES-parameters" command in order to get core dump information. This program makes use of these read parameters in order to determine which core dump tables and space is available. More specifically Elko does determine which disks are and are not core dump disks as can be seen from column 30, lines 25-30, which "represents the number of core dump table, *if any*, located within dump space".

Art Unit: 2114

(emphasis added) Elko would have to know which disks were dump disks in order to search for these labels. Therefore, examiner respectfully maintains the rejection.

Applicant Argues:

Applicant argues that Hetrick does not disclose a system for "writing a "kill" signature to a core region header of the core dump disk in order to return the core dump disk as soon as practicable to the "hot" spare status, wherein the "kill" signature terminates the core dump operation to the core dump disk". Applicant further argues that there is no disclosure of Hetrick responding to an event to that requires that the disk marked core dump be used prior to storing the data in the disk.

Examiner's Response:

Examiner directs applicant to column 4, lines 33-44 where Hetrick clearly discloses a hot spare drive that is selected from available hot spare drives to be used for a core dump to save information from the failed drive. This clearly shows that when a drive fails a command is sent to the hot spare to recover the data from the failed drive and store it. As shown in column 4, lines 56-59 once the failed drive is repaired the hot spare that was used is issued a command to return to its hot spare status. Therefore, examiner respectfully maintains the rejection.

Applicant Argues:

Applicant argues that neither Elko nor Reeves disclose, "a file system region including storage space for the pointed-to by the core region that is adapted to store a complete core dump data therein so as to define the disk as a dedicated core dump disk. Applicant further argues that Reeves has no suggestion of copying the file system data to a particular region of the disk.

Examiner's Response:

Examiner directs applicant to Elko column 30, lines 26-36 where it teaches that the file system data is stored on the core dump disk, the core dump information would be stored in the areas according to the core dump tables. These defined regions would be the specific regions in which are defined by these areas. Similarly Reeves defines the core disk as the region in which the storage system data would be stored. Therefore, examiner respectfully maintains the rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 2114


extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Assessor whose telephone number is (571) 272-0825. The examiner can normally be reached on M-F 9:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571)272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BA


SCOTT BADERMAN
SUPERVISORY PATENT EXAMINER